

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference KSUP0201PC	FOR FURTHER ACTION see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.	
International application No. PCT/US 00/ 24025	International filing date (day/month/year) 01/09/2000	(Earliest) Priority Date (day/month/year) 03/09/1999
Applicant KENT STATE UNIVERSITY et al.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 6 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

- a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

- b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing :

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished

2. ☒ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (see Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.

☒ as suggested by the applicant.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

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☐ None of the figures.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/24025

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 G02F1/1334 G02F1/1337

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G02F

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

PAJ, INSPEC, EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 11, 30 September 1999 (1999-09-30) & JP 11 153787 A (FUJI XEROX CO LTD), 8 June 1999 (1999-06-08) abstract	1-7, 13, 25
P, X	& US 6 083 575 A 4 July 2000 (2000-07-04) column 6, line 32 -column 7, line 21 ----	1, 25
A	NAZARENKO V G ET AL: "Oriented dispersion of liquid crystal droplets in a polymer matrix with light induced anisotropy" MOLECULAR MATERIALS, 1993, UK, vol. 2, no. 4, pages 295-299, XP000965024 ISSN: 1058-7276 page 295 -page 296 ----- -/--	1, 25



Further documents are listed in the continuation of box C.



Patent family members are listed in annex.

° Special categories of cited documents:

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

* & * document member of the same patent family

Date of the actual completion of the international search

2 April 2001

Date of mailing of the international search report

25.04.01

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Authorized officer

Diot, P

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	PATENT ABSTRACTS OF JAPAN vol. 1999, no. 13, 30 November 1999 (1999-11-30) & JP 11 237612 A (FUJI XEROX CO LTD), 31 August 1999 (1999-08-31) abstract ---	1
A	EIJI SHIMADA ET AL: "CONTROL OF POLYMER ORIENTATION IN POLYMER DISPERSED LIQUID CRYSTAL (PDLC)" JAPANESE JOURNAL OF APPLIED PHYSICS, JP, PUBLICATION OFFICE JAPANESE JOURNAL OF APPLIED PHYSICS. TOKYO, vol. 31, no. 3B, 15 March 1992 (1992-03-15), pages L352-L354, XP000323120 ISSN: 0021-4922 the whole document ---	1,25
A	EP 0 568 355 A (SHARP KK) 3 November 1993 (1993-11-03) page 45, line 39 -page 48, line 31 page 49, line 38 -page 50, line 36 ---	1,7
A	PATENT ABSTRACTS OF JAPAN vol. 1996, no. 11, 29 November 1996 (1996-11-29) & JP 08 179286 A (CASIO COMPUT CO LTD), 12 July 1996 (1996-07-12) abstract ---	1,25
A	JAIN S C ET AL: "A TECHNIQUE TO ALIGN LIQUID CRYSTALS BASED ON BULK-INDUCED PHOTO-POLYMERIZATION" MOLECULAR CRYSTALS AND LIQUID CRYSTALS SCIENCE AND TECHNOLOGY. SECTION A. MOLECULAR CRYSTALS AND LIQUID CRYSTALS, GORDON AND BREACH PUBLISHERS, CH, CH, vol. 288, 1996, pages 153-160, XP000965455 ISSN: 1058-725X Chapter: Alignment mechanism ---	19-23
A	EP 0 689 084 A (HOFFMANN LA ROCHE) 27 December 1995 (1995-12-27) page 3, line 40 -page 4, line 43 ---	19-23
A	US 5 602 661 A (SCHADT MARTIN ET AL) 11 February 1997 (1997-02-11) column 1, line 58 -column 5, line 38 ---	19
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INTERNATIONAL SEARCH REPORT

International Application No

PCT/US 00/24025

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	<p>CORVAZIER L ET AL: "INDUCTION OF LIQUID CRYSTAL ORIENTATION THROUGH AZOBENZENE-CONTAINING POLYMER NETWORKS" MACROMOLECULES,US,AMERICAN CHEMICAL SOCIETY. EASTON, vol. 32, no. 10, 18 May 1999 (1999-05-18), pages 3195-3200, XP000978651 ISSN: 0024-9297 the whole document -----</p>	1,19